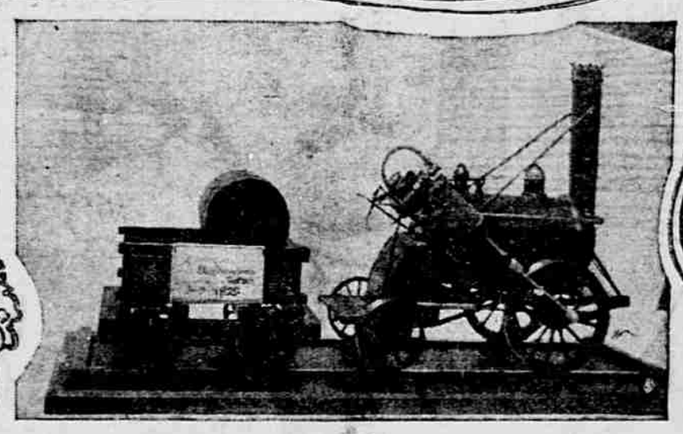
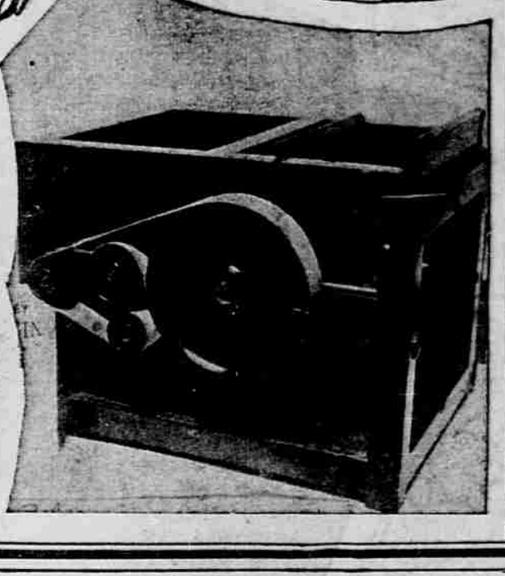
REVOLUTIONIZED THE WORLD, BUT NOT BY THE SWORD

Supt. Bucks and Model of Engine Invented by Hero of Alexandria, 150 B. C.

F STREET FRONT OF THE PATENT OFFICE.



Model of George Stephenson's Locomotive, Rocket, 1829.



ELI WHITNEY'S COTTON GIN.

THE MODEL HALL.

Products of the Mind of Genius and the Hand of Skill That Have Changed the Arts and Industries of the Universe—How the Seal of Ownership Is Set Upon Them by the Government With Profit to Itself --The Patent Office Balance $5,000,000.

A Branch of the Government Service Once Treated With Indifference and Neglect, But Now Considered One of the Most Important and Valuable---Formerly Without Habitation or Home, Its Extensive Quarters Now Too Contracted for Its Work.

Of course everyone knows that a branch of the Governmental service known as the Patent Office is located somewhere in Washington; but to the greater portion of the population it appears as a mysterious and shadowy institution, with which are associated vague ideas of the great inventions of the age, and the fabulous wealth they have brought their inventors. Very few, indeed, realize the vast good this department has done the country—the entire world, in fact—nor are they aware of the large revenues which it annually brings into the treasury.

Without the Patent Office Department, which gives solely to the inventor the right to reap the profits of his invention and protects him from unscrupulous persons seeking to infringe his rights, there would have been nothing to incite Howe, Edison, Morse, and many others to the efforts which brought forth their revolutionizing inventions; and the country would be far behind its present state of civilization. The steam engine would be unknown; the candle and lard-oil lamp would occupy the places now filled by the electric light, the acetylene lamp and the Welsbach gas-burner; and the loom and spinning-wheel would still be found in every household.

A Profitable Institution.

From a monetary standpoint, the Patent Office is far in advance of the other Government departments. Not only does it entirely pay its expenses, a thing which cannot be said of any other national institution, but it has to its credit in the Treasury a surplus of more than $5,000,000.

To George Washington, with that wonderful foresight which characterized him, is due the credit for the institution of the Patent Office. In his first annual message to Congress, in 1790, he said:

"I cannot forbear intimating to you the expediency of giving effectual encouragement as well to the introduction of new and useful inventions from abroad as to the exertion of skill and genius in producing them at home."

Under the early laws the office was primitive in the extreme and its operation crude; the number of patents issued did not exceed twenty per year. The exact figures cannot be fixed, owing to fires which destroyed the early records. Numerous patent acts have been passed which tended to improve the conditions of the office and in 1870 an entire revision of the statutes took place. The new laws provided that patents should be granted for terms of seventeen years each, and prohibited the extension of those granted subsequent to the act. Prior to this time, under the act of 1836, patents had been granted for terms of fourteen years with an extension of seven years upon a proper showing by the inventor. By a revision of the laws in 1874, the prohibition of extension was abandoned and since that time Congress has had the power to prolong the life of a patent, provided it can be shown that the inventor, through no fault of his own, has been denied the profit of his invention. As yet, however Congress has not extended a patent under the new law.

Led a Strenuous Life.

In the early part of the last century the Patent Office, then in the first years of its life, endured a strenuous existence. At first it was moved about from place to place, looked after by the few persons who could find time to do so, and considered generally as a department without which the Government would be much better off. In a report of the Register of the Treasury for 1803 there is a statement from which it would appear that the young institution was not considered of sufficient importance to warrant the appropriation of money to pay the salaries of the men connected with it. These were, no doubt, paid a percentage of the receipts of the office.

In 1810 the first provision for its permanent accommodation was made. Congress purchased a building known as "Blodgett's Hotel" to be used as a general postoffice with a space reserved for the "Keeper of Patents." This building occupied the site now covered by the south front of the Land Office.

In 1836, the building, mysteriously taking fire, burned to the ground and the Patent Office was once more homeless. An appropriation had already been made for a new building, however, and work was rapidly progressing on a structure to be used solely by the Patent Office. This was completed in 1840. During the intervening four years, the department found refuge in the City Hall.

Larger Quarters Needed.

Although additions have been made to the building from time to time, and it now occupies an entire city block, the Patent Office is sadly in need of larger quarters. Since 1816 the number of employes has increased from three men, drawing scarcely more than $1,500 in all, to nearly 700 men and women, who, in 1900, were paid more than half a million dollars for their services. This large force is crowded into a space hardly adequate to accommodate more than two-thirds their number. As a result, many of the interesting models, including that of Abraham Lincoln's invention, a device for raising sunken ships, are crowded away in another building. Several bills have been introduced into Congress to provide a new building, but as yet nothing definite has been accomplished.

Nearing the Million Mark.

On January 1, 1901, nearly 700,000 patents had been issued. Of these, about one-sixth were granted to women, from which it will be seen that the proportion of female inventors is small, although some of the patents issued to them have been for highly important inventions. The proportion of colored inventors is also small. Among them is Henry Blair, of Maryland, who invented one of the first practical corn planters. Some time before the civil war a slave owner of Mississippi applied for a patent on an invention belonging to one of his slaves, but the Attorney General held that the invention of a slave, though it be new and useful, could not be patented.

Defects in the Practice.

Although the patent practice is far in advance of what it was some years ago, it still contains many defects. One of the most evident is the ruling which makes it possible for an application to remain in the office for one year without being acted upon by the inventor. As a result the examiners' rooms are crowded with rejected applications which are awaiting the action of their inventors.

Another faulty practice is the frequent change of Commissioners of Patents. It is highly necessary that the man occupying this responsible position should be thoroughly familiar with the practice of the office, yet a new Commissioner is appointed every few years. Not only does this render harder the work of patent attorneys, never easy at best, but it endangers the interests of inventors.

Edison Heads the List.

Among the great men who have obtained United States patents are Edison, who has been granted 748, the largest number issued to any one man; Westinghouse, 239, and Maxim, 146. A large number of the important inventions of latter days are merely improvements on previous efforts along the same lines. For instance, Marconi was not the discoverer of wireless telegraphy; Howe did not first invent the sewing machine, and the principle of the phonograph was known long before Edison was born. It may thus be seen that it is the improvements as well as the original invention which bring fortunes.

COMMENT FROM THE NOTEBOOK OF A GIRL WHO GOES OUT.

ALTHOUGH there is less dancing going on in Washington in the springtime than before the penitential season which caused us girls and boys to lay aside our light fantastic pumps and slippers, I must say that we have been making the most of our limited opportunities. To the really properly constituted dancing girl or dancing man it is as natural to skip about in the gay April time or the merry May time as it is to seek the sunshine in the morning or to take one's breakfast.

We have, therefore, welcomed the few invitations that have thus far come to us to join in the dreamy waltz, or participate in the cotillion and are still hoping that some thoughtful host or hostess will open a ballroom for a final prance before we surrender all thought of spring and early summer jumping about. There are several ballrooms in town that need airing and there is really nothing the matter with the sky parlors at the New Willard, where such successful cotillions have taken place and the shaded pink lights of which are so very becoming.

There is, of course, a system to be pursued in dancing as in everything else: no clever girl or man ever accepts a partner for the cotillion without mature deliberation. The partner must needs be sympathetic and sufficiently conversational; his step must suit mine, and mine his. It scarcely pays to take any chances. I once wrecked an evening at a cotillion by confiding myself to an alleged dancing man from a certain foreign country. He smashed me periodically in the chest, lamed my right arm, stepped on my toes and ended by getting entangled in my airy train, from which he was only extricated after he had torn a breadth or so of chiffon. That is why I have applied my system at recent dances; my partner and I have usually attended the same dancing school; we know each other's step backwards, a strong right (American) arm sustains me, and we call each other "Clara" and "Charlie" for short, without the faintest embarrassment in commemeration of the mud pies of our childhood. "Now then, Clara," says Charlie, as the energetic leader of the cotillion singles us out with a few other couples, and away we go to the captivating measures of the waltz. Rosier and rosier grow the shaded pink lights of the ballroom, smoother and smoother the waxed floor, there is a bubble and sparkle of champagne in the music and the exhilaration of cleaving space in the movement. "Thanks, Charlie," says I, as the music stops and my head continues to go around. "Good for you, Clara," says Charlie, "that was great!"

A recent cotillion was all the better conducted because of the leader's lack of what would seem to be the chronic affectations. After all, there is nothing to be gained and everything to be lost in running to and fro, stamping the foot and clapping the hands. This leader seems sure of himself and of us—so much the better. The fact is that a little dancing is an excellent antidote to sitting through dinner and music and cards, and of course we girls expect to dance when we are asked out after Lent. You see, after-dinner exercise is the best thing in the world for the circulation. The blood is quickened, the spirits exhilarated, the world looks brighter and everything seems couleur de rose. During a successful cotillion I can cheerfully forgive my acquaintances all the criticisms they have made behind my back and my intimate enemies everything they have said to my face—from which I conclude that dancing is not only a healthful exercise but a moral agent for the diffusion of good-will toward all.

Although in one sense of the word I am not "musical," I really think that if I continue to go out in the afternoon and to be asked about after dinner I shall become so, for the amount of music, vocal and instrumental, to be heard around Washington is really phenomenal, and it is, incidentally, quite time for me to discover that I have a voice, array myself in a white frock (with or without blue ribbons) and join in a chorus. The development of a singing voice is eminently the thing to do. I have an intimate friend who is now engaged in cultivating hers at the expense of the entire neighborhood's nerves and amidst the execrations of unsympathetic friends gifted with an accurate ear. The sounds she emits cannot be classified as anything human, and yet I have no doubt that in due course of time she may succeed in being ranked as either a soprano or a contralto—possibly both. There is, however, some really creditable amateur talent, and the study of harmony in any event can do no one any harm. I must say, however, that I prefer to listen to either professional singers or that small group of amateurs who really possess voices perfected by close study and long experience. There are several such ladies in Washington society, notably Mrs. Stilson Hutchins, Mrs. Noyes, and Miss Ethel Robson, and their talent is an equal source of pleasure to themselves and their acquaintances. I do not in the least agree with the dictum that everybody has a singing voice if they will only yield to treatment and development. On the contrary, there are incipient singing voices that should be suppressed, if one may judge by occasional discords "oft in the stilly night."

Recently there have been two great treats in the musical way: Miss Esther Palliser has sung in private at the White House musical, and May Irwin has been giving her coon songs in public. I don't know which I enjoyed more. Miss Palliser possesses as great vitality as the coon song comedienne, and a beautifully cultivated voice of great natural beauty and range, and yet both affect me in precisely the same way as singers who have "a message" for the world and who sing like the birds because they can't help themselves.

Life is, however, by no means all music or dancing or going out to ladies' luncheons and men-and-women dinners, with an occasional theater party and restaurant supper to follow. We girls spend most of our time out of doors in the springtime. Every morning I ride my favorite, because my only, nag—she's a regular Virginia beauty—and every afternoon I handle the reins and out and away to where the dogwood is blooming and the fruit trees in flower and the lanes are growing greener every day. Much as I enjoyed an occasional race day at Begning, I am glad, on the whole, that the meeting is over and that there is nothing to keep me from the other end of the town. I put on my best tailor-made, and what Charlie calls my billy-cock hat—one of those jaunty tri-cornered straws—and feel myself emancipated from the obligation of making afternoon calls and attending "days." There is, of course, an occasional Tuesday or Thursday, when I have the Victoria, get myself up in a smart taffeta, and put on my big half-covered with velvet flowers in an attempt to rival the gorgeous geranium headgear of that charming bride of the Belgian Legation, Mme. Moncheur.

As I either drive or am driven, I pass all the pretty women, and the smart woman, or both, in their spring toggery—which is usually capped by a floral headpiece—for this is the time of the season when the afternoon parade is most enjoyed. The wonderful hats of some of the youthful belles, notably the Countess Marguerite Cassini and Miss Isabel May, the blooming chapeaux of Mme. Hengelmuller, and Mrs. Van Rensselaer Cruger, the violets of Mrs. Townsend and the roses of Mrs. Chatfield-Taylor—all these appear and disappear like an aerial garden en route. And I sometimes pass Miss Alice Roosevelt driving with some of her young girl friends and looking very trim in her favorite color, dark blue. She is an expert at handling the reins, and enjoys nothing more than a brisk drive. The Misses Warder, in their foreign-looking cart, are among the other attractive figures of the drive. Now and then I catch a glimpse of young Mrs. James G. Blaine, on from New York to visit her home city, and prettier than ever with that indefinable air of smartness that comes of Metropolitan and cosmopolitan experience. In short, it is a procession of old friends and new acquaintances, and I never drive out on a fine day that I do not congratulate myself on being a Washingtonian. Where else in the season can there be found such a combination of good roadways and nice people? Compare the labored progress up and down overcrowded Fifth Avenue with this free circulation and firm service. Why, as Charlie says, it "isn't in it!"

The season is now suburban, and no invitation is so much prized as that which takes one out to the Country Club or to some hospitable country house, and yet the dinner invitations extend well into May at town houses, and theater parties are still in vogue. Perhaps it is a case of combination—an evening in town makes a good contrast to a day in the country, or else after a day in town there is nothing like a little dinner in the country. After the formal comes the informal; after winter garments all the pretty, light airy things we women can put on for spring and early summer, after the indoor festivities the promise of the garden party; I am, therefore, to tell the truth, paying far more attention to what I wear in the daytime than what I drape myself in for dinner and music and theatergoing and the occasional dance. There is no such thing as a fresh ball dress in my wardrobe, but there are plenty of fluffy things to wear out of doors, formally and informally, and I am far better fitted to attend a picnic or a garden party or a country club or Chevy Chase afternoon tea than I am to figure in any unexpected cotillion; at the same time, I could make myself presentable if "expected," and my foot goes a-tapping as I hear the rumor of a possible spring sauterle at a certain embassy.

COUSIN CLARA.

LEGENDS OF THE CUCKOO

IN this country, as in Europe, the cuckoo bird is the herald of the late spring, as it is the merriest songster of summer. In America, from Louisiana to Labrador, the yellow-billed cuckoo, known in some country parts as the cow-bird, carries his tinkling note upon which tradition and popular superstition have placed so many interpretations. For ever since the Middle Ages the cuckoo's song has been the subject of the quaintest beliefs imaginable. In a certain county in England the peasants believe that whatever they are doing the first time they hear the cuckoo, they will do most frequently all the year; and furthermore, that an unmarried person will remain single as many years as the cuckoo, when first heard, utters its call.

There is a curious legend among the Danes regarding the cuckoo. When in early springtime the voice of the cuckoo is first heard in the woods, every village girl kisses her hand and asks the question: "Cuckoo, cuckoo, when shall I be married?" and the old folks, borne down with age and rheumatism, inquire, "Cuckoo, cuckoo, when shall I be released from this world's cares?" The bird, in answer, continues singing "Cuckoo" as many times as years will elapse before the object of their desires will come to pass. But as some people live to an advanced age, and many girls die old maids, the poor bird has so much to do in answering the questions put to her that the building season goes by; she has no time to make her nest, but lays her eggs in that of the hedgesparrow.

The cuckoo was often celebrated in the medieval poetry of all ages and all languages, and was looked upon as possessing some share of supernatural knowledge. In some parts it seems to have been an article of belief that it was one of the gods who took the form of the bird, and it was considered a crime to kill it. Its most singular quality in this superstitious lore was the power of telling how long people would live, the faith in which is still preserved among the peasantry of many parts of Germany and the north of Europe.

The cuckoo is the subject of the oldest English song now in existence, dating from the earlier half of the thirteenth century, and remarkable for being accompanied with musical notes, and being the earliest sample of English secular music. The words are as follows:

Sumer is icumen in,
Lhude sing Cuccu;
Groweth sed, and bloweth med,
And springeth the wde nu.
Sing Cuccu.

Awe bleteth after lomb,
Lhouth after calve cu;
Bullue sterteth, bucke verteth;
Murie sing Cuccu,

Cuccu, Cuccu.
Wel singes thu, Cuccu;
Ne swik thu naver nu.*

Which may be interpreted in modern English—

Summer is come in,
Loud sing Cuckoo;
Grows the seed and blooms the mead,
And springs the wood now.
Sing Cuckoo.

The ewe bleats after the lamb,
The cow lows after the calf;
The bullock leaps, the buck verts,*
Merrily sing Cuckoo.

Cuckoo, Cuckoo.
Well singest thou, Cuckoo;
Cease thou never to sing, Cuckoo.

*Goes to the fern.

It will be remembered that there is a somewhat similar kind of song in Shakespeare's "Love's Labor Lost," where spring is "maintained by the cuckoo." It was the spring, indeed, and not the summer, that the cuckoo was considered to represent in the Middle Ages. There is an early Latin poem on the cuckoo in connection with spring, which is ascribed, no doubt incorrectly, to Bede, in which the cuckoo is called upon to awake because the spring had arrived:

Tempus adest veris, cuculus, modo rumpe soporem.

It is the popular belief in some places that the cuckoo always makes its first appearance on the 21st of April.